The German Market for Water Treatment / Analysis Equipment

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July 2005

Summary

The German environmental equipment and services market ranks among the top three in the world. Driven by recent European Union (EU) legislation and a particularly environmentally conscious population, Germany's stringent environmental regulations have surpassed even the EU's highest standards. For example, the recent Waste Storage Ordinance, passed June 1, 2005, mandates that all landfilled waste be pre-treated by 2009. Additionally, the German government recently decided to double the share of renewable energy in the energy supply by 2010 and to meet one-half of the energy demand with renewables by 2050.

In the water resource equipment sub-sector, the German market is highly mature and competitive. German firms and municipalities invest over USD5 billion every year in wastewater treatment – an amount comparable to that of the automobile industry. Over the last ten years, these heavy investments, focusing on the area of water technology, have caused the market to boom. Germany is now one of the world's top exporters of water treatment and analysis equipment and Europe's top exporter of pumps, process equipment, ion exchangers and instrumentation. Due to heavy saturation, the German market for water and wastewater treatment equipment is expected to decline by 4% between 2005 and 2008, from USD429.7 million to USD408.6 million.

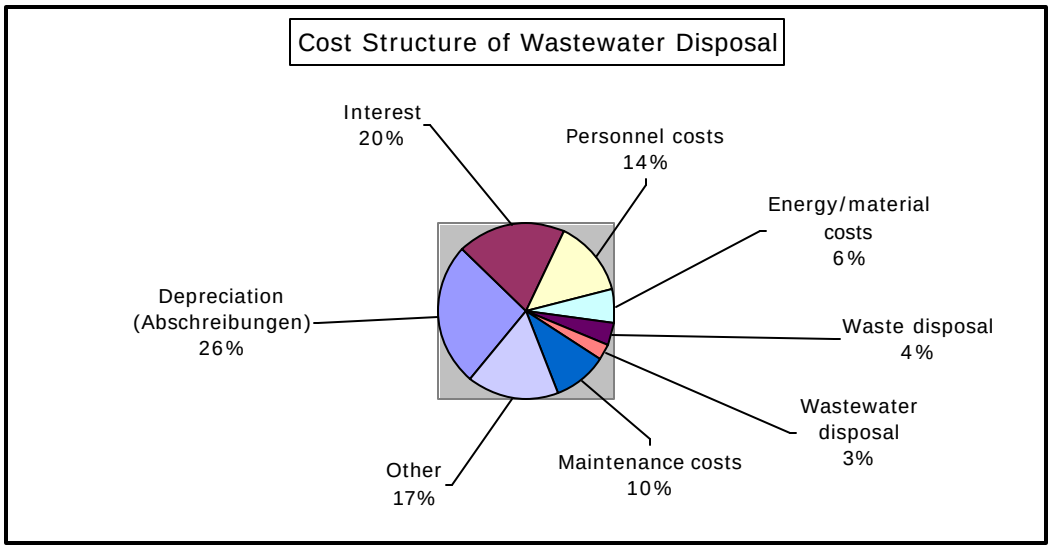
As a result of high fragmentation, the German market for water resources equipment is not dominated by foreign firms and can be very difficult to enter. The United States accounts for approximately 9.4% of German imports of pollution control equipment. Products offered in the water treatment and analysis equipment sub-sector include biological and chemical treatment equipment, septic systems, disinfection and sterilization equipment, sewer systems, and wastewater treatment plants. Best prospects for U.S. firms include technology for wastewater treatment plants and sewage lines, as both systems will require heavy renovation and repair over the next ten years. U.S. firms should also take advantage of opportunities to partner with German firms for municipal projects and seek to invest in the former East Germany, where water systems are not as advanced as in Western Germany.

Market Overview

New European Union directives and the resulting, more stringent, German regulation will continue to drive the German market for water resource equipment. As a result of this legislation and Germany's long-standing commitment to water conservation and preservation, Germany's water resource systems are highly developed. Approximately 95% of German citizens are already connected to one of the 10,500 water treatment plants, and Germany ranks high among EU countries with an 86% treatment rate of wastewater.

German regulation places primary responsibility for water treatment and distribution upon municipalities. The resulting system is both extensive and fragmented. Of the wastewater treated by the 8,000 public and private firms involved in the market, 99.5% (10,5 billion m³/year) is treated in public plants. Another 7,000 firms are involved in water supply. 6,700 of these are small- and medium-sized water suppliers, and the 5,000 smallest firms only provide for 17% of population. Germany ranks far higher in number of water suppliers than many other EU countries, including France (4), England (20), and the Netherlands (20).

The inefficiencies resulting from this fragmented system have been suggested as one possible source for exceptionally high water prices in Germany, which rank second in Europe at 1.71 €/m³ drinking water and 2.24 €/m³ wastewater on average (2005). These prices vary greatly geographically, between EUR0.30 and EUR5.50 per cubic meter, but have demonstrated stability (taking into account inflation) since 2000 and will likely remain relatively stable in the foreseeable future. Treatment and disposal of wastewater costs an average of EUR127 per year per person, with almost one-half of the costs the result of depreciation and interest payments.



Source: ATV-DVWK and BGW, *Abwasser 2003*

The fact that the German system is administered by municipalities makes it very difficult for foreign firms to break into the market. In order to achieve organizational and administrative efficiency, the majority of municipalities either engage a public company or contract a local private firm directly. Some of these private companies, however, are looking to partner with foreign firms and are seeking in particular advanced technology products. Due to heavy competition with local firms and the high saturation of the market, the U.S. export market to Germany is currently in decline for water resource equipment, as is the entire German market for this sector.

Market Trends

As a result of EU pressure, the German market is moving toward liberalization, though not without stiff opposition. In 2003, publicly owned firms received 20% of the contracts for water treatment, down from 44% in 1997. Contracts between private firms and municipalities, on the other hand, increased from 30% in 1997 to 43% in 2003. Additionally, the number of contracts given to private water associations increased from 4% to 18%.

Organizations handling wastewater treatment

Form of Organization	1997	2003
Public firm	44.0%	19.7%
Private firm	30.0%	42.7%
Public Institute (*Anstalt öffentlichen Rechts*)	14.0%	17.0%
Administrative associations/water associations	4.0%	12.8%
Other	8.0%	7.8%

Source: ATV-DVWK and BGW, *Abwasser 2003*

This trend is also reflected in the construction of municipal water treatment plants. Although public firms still supervise 59% of such projects, private firms are now contracted for the actual construction of 91% of the plants. The extent of liberalization will likely be determined in the next few years, as German water organizations, such as the Deutsche Vereinigung des Gas- und Wasserfaches (The German Technical and Scientific Association for Gas and Water), contend with increasing market pressure. In 2005, however, an EU directive on the liberalization of water was defeated, and municipalities still retain primary responsibility for water treatment and provision and decide to what extent (and if) liberalization occurs.

Import Market

Due to the stagnation of the water resource equipment market in Germany, imports have decreased in recent years. From 2001 to 2003, U.S. exports to Germany of pollution control equipment fell from USD1.35 billion to USD1.2 billion and are estimated to decline further to USD1.1 billion in 2005 and USD1.06 billion in 2006. U.S. companies are responsible for 10% of German imports of pollution control equipment, a market with a domestic value of over USD110 billion.

As a leading exporter in the world market, German imports of pollution control equipment account for approximately 11.4% of its market. Due to an exceptionally high number of companies and regulatory fragmentation, the German market is dominated by domestic firms and does not import heavily.

One of the few foreign companies to rank among the top competitors in the German municipal water and wastewater equipment market is the French firm Veolia Water (formerly Vivendi), a subsidary of Veolia Environment. The world's leading water supplier, Veolia competes with smaller German companies by offering lower prices and more efficient and productive management systems. If the current trend in Germany toward liberalization continues, it is likely that a greater number of large foreign firms will break into the German market, as they are in a position to offer much lower prices and exhibit more efficient organization than the small and medium local firms that currently dominate the market together with regional monopolies.

Competition

The top ten water providers in Germany have a market share of only 20%. The top and internationally most competitive firm is Thames Water, a division of the German utility firm RWE. After Veolia Water and Suez Water, both French companies who control over 70% of the world's water services, Thames Water is the world's third largest water company and provides water services to approximately 70 million people worldwide. RWE reported EUR2.8 billion in net sales in Germany for 2004. Top German manufacturers of water treatment equipment include VA Tech Wabag (recently purchased by Veolia Water), Passavant-Roedinger, Bamag Water, and Christ Water.

These companies are particularly successful due to the fact that they offer design, planning, and engineering services in addition to their own water technology products.

The main markets for many of these companies are outside Germany, where they can maintain the capability to engage in large projects despite the stagnant market at home. Small and medium-sized water companies are better suited to handle the small municipal projects available throughout Germany, preventing the big companies from gaining a larger share of the domestic market.

Despite the fact that German companies set world standards in water technology, the vast majority of German companies do not compete internationally. The continuing prevalence of public firms and small inefficient regional monopolies prevent many companies from achieving the size and price level necessary to compete with large conglomerates. Some firms, therefore, are pushing for liberalization, which would force German firms to become more competitive and, as a result, increase Germany's presence in the international water resources sector.

The market continues to be dominated by medium-sized German water companies, which do not truly compete, as they are granted regional monopolies by municipalities. Governments tend to contract out to local companies having experience with regional regulation: Although the federal government establishes national water directives, specifics of regulation and implementation are still the responsibility of municipalities. Proximity, therefore, will remain a key competitiveness factor, making the German market still more difficult for U.S. companies to enter. In order to win public contracts, firms must establish a good relationship with local officials and industry leaders and possess knowledge of the bureaucratic system with which they are working.

With increasing liberalization, however, price will likely increase in importance as a key competitiveness factor. Due to the high price of water (the second highest in the EU), Germany's sixteen independent states (Bundesländer) face increasing public discontent. As liberalization increases, more foreign firms should be able to break into the market. Veolia Water has already won a number of contracts with municipalities, including several in Thuringia, Weisswasser (Sachsen), and Braunschweig (Niedersachsen), worth over EUR1 billion collectively. In 2004, Suez Water signed a EUR700 million deal with the municipality of Cottbus, Brandenburg. Even these international companies that have done well in the German market, however, are still fighting sluggish growth in the German private sector, as compared to their other markets abroad.

End-User Analysis

As a result of the high cost of water and the implementation of the polluter-pays principle, German industrial involvement in the treatment of wastewater is on the rise. The vast majority of water (99.5%), however, is still treated in public plants. Without exception, all densely populated areas in Germany are connected to water treatment facilities; it is only in the rural areas and some parts of the former East that still require such plants.

Much of the demand in Germany, then, centers on small- to medium-sized projects. Such contracts are given to local firms who have already cultivated ties with local governments and understand the workings of the local bureaucracy. The time required to develop these relationships and gain the necessary knowledge often makes the process impractical for foreign firms. American firms should take advantage of opportunities to partner with German companies that have regional expertise.

Best Prospects

Wastewater Treatment Plants – Aging facilities installed during the 1980's will require repair and renovation within the next ten years. Although local firms are likely to win the contracts, these companies will seek the most up-to-date technology available, resulting in an increasing number of technology partnerships. A number of U.S. firms have already succeeded in forming such partnerships. In March of 2005, for example, US Microbics made a deal with Dr. Brenner + Munnich Ingenieurgesellschaft for water clean-up technology.

In keeping with its goal of 100% access to water treatment, German municipalities must also install facilities for the remaining, uncovered 5% of the population. Many of these plants will be small- to medium-sized for rural populations throughout Germany and small cities in the former East.

Sewage facilities - One exception in the declining German water resources equipment market is sewage, the largest sub-sector of the market, which increased approximately 1% from 2002 to 2003 with a investment volume share of approximately 66% (EUR4 billion) in 2003.

Although water treatment systems are in place for over 95% of Germany, many of these systems will need renovation or repair in the next ten years. The majority of Germany's treatment facilities were put into place in the 80s and early 90s as a result of a heightened environmental conscience following the economic boom of the 60s and 70s. Additionally, it is estimated that 17% of the 300,000 miles of public sewage lines in Germany will require repair and renovation as do 40% of the 750,000 miles of private sewage lines. German firms will likely seek partnerships with foreign companies to obtain the most advanced technology for these repairs.

Hydroelectric equipment – The German government hopes to eventually meet 50% of energy needs with renewable energy sources. In keeping with this goal, demand can be expected to increase for systems generating electricity from sustainable sources, particularly hydroelectric systems, a large German export market.

Membrane Separation Systems –As the complexity of contamination of water increases, demand has rapidly grown for advanced water treatment systems such as Membrane Separation systems. Membrane systems constitute close to a third of the total revenue in the water resources equipment market, and demand is expected to annually increase 6-7% over the next ten years. In municipal water treatment, the three prominent membrane systems are microfiltration, ultrafiltration, and nanofiltration, constituting 50%, 33%, and 10% of market revenues, respectively.

Biological Treatment Systems – German plants treat 96% of sewage biologically, and the market for such equipment is expected to continue to exhibit strong growth. Approximately 28% of sales in wastewater treatment systems are in the biological treatment sub-sector.

Market Access

Labels and Correspondence

All correspondence between companies and government bodies and purchasing agents must be conducted in German. Additionally, all literature and labels for products must be printed in German, although labels printed in multiple languages are also allowed.

Hazardous or toxic substances listed in the European Union toxic substance reference list must be labeled toxic. Even if the import is not on the list but known to be toxic, the product must be labeled accordingly. All imported chemical and biological substances

must be listed in the EINECS (European List of Existing Chemical Substances) or ELINCS (European List of New Chemical Substances) inventory guide.

Certification and Permits

Since 1997, all electrical equipment exports to members of the European Union must bear the CE ("conformite europeene") mark, which indicates compliance with European Union standards.

Import permits are only necessary for specific categories or certain countries not listed on Import List. Those products that require permits are typically those subject to quotas, for example steel products. The import of industrial goods to Germany, however, is almost completely liberalized, and no import permit or declaration is typically required.

Products that require import permits (and some that do not) also require a certificate of origin if stipulated in the Import List or in the import permit. Such certificates must be issued by official body of the country of origin.

EU-wide patents can be obtained by filing an application with European Patent Office in Munich. Patents in the European Union are valid for 20 years, but extensions can be granted for products that require long periods of time for approval.

All goods shipped to Germany should include the following documents:

- Commercial Invoice
- Pro-Forma Invoice
- Bill of Lading
- Certificate of Origin
- Import License (where required)
- Insurance Certificate
- Packing List (not usually required, but will expedite clearance of goods)

Duties

Germany operates under the Community Integrated Tariff (TARIC) system, which applies duties to all imports from non-EU countries. Germany uses the Harmonized System (HS) to classify goods that are traded internationally. All products must have a HS number, which determines the duty. A duty of 1.7% is levelled for most equipment used in the treatment of wastewater.

A VAT (value-added tax) is applied to all goods and most services imported to Germany. The tax is typically 16%. No VAT, however, is levied on sample goods, advertising materials for goods, or goods that are only temporarily imported (i.e. for exhibits at trade fairs).

Standards

German requirements for safety and reliability of equipment, plants, technology and products are set by more than 200 technical standards and rules. Important marks include the "Verband Deutscher Elektrotechniker" (VDE) mark for electrical components and the "Geprüfte Sicherheit" (GS) mark for mechanical products. The GS mark is given by the TUEV Rheinland Group, which provides a variety of international certification services for machinery and electrical equipment, including the CE ("conformite europeene") mark and Environmental Management Systems (EMS) certification (ISO 14001); their North American offices can be found online at http://www.us.tuv.com/. Underwriters Laboratories (UL), a global company based in the United States, also

provides these marks and can be found online at www.ul.com. German agencies responsible for standardization include the Deutsches Institut für Normung e.V. (for all products) and Deutsche Vereinigung des Gas- und Wasserfaches e.V. (specifically for water and gas). For information concerning water quality standards, see the Drinking Water Ordinance, which implemented the EC Drinking Water Directive: http://bundesrecht.juris.de/bundesrecht/trinkwv_2001/index.html (in German).

Market Entry

Due to the difficulty of breaking into the German market and a relatively high cost of entry, distributors, wholesalers, and agents can present the best options for introducing products to Germany. In order to guarantee national distribution, companies should seek more than one distributor or wholesaler, as they have varying degrees of coverage.

Agents and commercial representatives can also be important in the introduction of a product to the German market, particularly for small- and medium-sized companies. They can enter into agreements on behalf of an American company, but do not take ownership of the goods they sell.

Key Contacts

Representative Agencies

Bundesverband des Deutschen Groß- und Außenhandels e. V. (BGA)
(National Federation of German Wholesale and Foreign Trade Association)
10873 Berlin
Tel: 011-49-30-59 00 99 50
Fax: 011-49-30-59 00 99 519
Internet: http://www.bga.de/
Email: info@bga.de

Centralvereinigung Deutscher Handelsvertreter-
und Handelsmakler-Verbände (CDH)
(Central Federation of the German Association of Commercial Agents and Brokers)
Am Weidendamm 1 a
10117 Berlin
Tel: -49-30/72625600
Fax: -49-30/72625699
Internet: http://www.handelsvertreter.de/
Email: berlin@eservice.cdh.de

Technical Regulations Agencies

German Standards Institute
(Deutsches Institut fuer Normung - DIN)
German Information Centre for Technical Rules (DITR)
10772 Berlin
Tel: 0190/882600
Fax: 030-2628125
Internet: http://www.din-katalog.de/
Email: walser@aoe.din.de

Society of German Engineers
(Verein Deutsche Ingenieure e.V)
P.O. Box 10 11 39
40002 Duesseldorf

Tel: 0211-62140
Fax: 0211-6214575
Internet: http://www.vdi.de/
Email: vdi@vdi.de

Association of Electrical Engineering Electronics and Information Technology
(VDE - Verband der Elektrotechnik Elektronik Informationstechnik e.V.)
Stresemannallee 15
60596 Frankfurt am Main
Tel: 069-63080
Fax: 069-6312925
Internet: http://www.vde.com/
Email: service@vde.com

For safety inspection and testing also see "Technische Ueberwachungsvereine" (TUEV), or technical control boards. (Internet: http://www.tuevs.de/)

Other Important Agencies

DWA: Deutsche Vereinigung für Wasserwirtschaft, Abwasser und Abfall e.V.
Theoder-Heuss-Allee 17
53773 Hennef
Tel: (02242) 8720
Fax: (02242)872135
Internet: http://www.dwa.de/
Email: info@dwa.de

Federation of German Waste Management Industries
Bundesverband der Deutschen Entsorgungswirtschaft e.V. (BDE)
Tempelhof Ufer 37
D-10963 Berlin
Internet: http://www.bde.org/
Email: info@bde-berlin.de

Trade Shows

Germany hosts leading international trade events in virtually every industry sector, attracting buyers from around the world. Over 90% of products and technologies are introduced into the German market via trade fairs. U.S. exhibitors should be prepared to take full advantage of the business opportunities presented at these events. While U.S. exhibitors and visitors can conclude transactions, all attendees can use major German trade fairs to conduct market research, see what their worldwide competition is doing, and test pricing strategies. Upcoming trade fares include:

Water Berlin – International Trade Show and Convention
(Wasser Berlin - Internationale Fachmesse und Kongress)
April 3 -7, 2006
Messegelände Berlin
Tel: +49-30-3038-2148
Fax: +49-303038-2079
Internet: http://www.wasser-berlin.de/
Email: wasser@messe-berlin.de

Entsorga-Enteco – International Trade Show for Waste Management and Environmental Technology
(Internationale Fachmesse für Abfallwirtschaft und Umwelttechnik)
October 24-27, 2006

Messegelände Cologne
U.S. representatives: Heike Schlimbach and Darrin Stern
Cologne International Trade Fairs
8700 W. Bryn Mawr Ave., Suite 640 North
Chicago, IL 60631
Tel: 773-326-9920
Fax: 773-714-0063
Internet: http://www.entsorga-enteco.com/
Email: d.stern@koelnmessenafta.com or h.schlimbach@koelnmessenafta.com

IFAT – International Trade Show for Water, Wastewater, Waste, Recycling
(Internationale Fachmesse für Wasser, Abwasser, Abfall, Recycling)
May 5-9, 2008
Neue Messe Munich
U.S. representative: Anke Gruening
Munich International Trade Fairs
German American Chamber of Commerce, New York
12 East 49th Street, 24th Floor
New York, NY 10017
Tel: 646-437-1014
Internet: http://www.ifat.de/
Email: agruening@munich-tradefairs.com

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Fax. +49-40-410 6598
Internet: www.buyusa.gov/germany/en/hamburg.html
E-mail: Birgit.Dose@mail.doc.gov

The U.S. Commercial Service Germany can be contacted via e-mail at: hamburg.office.box@mail.doc.gov, website: http://www.buyusa.gov/germany/en/.

You can locate your nearest U.S. Export Assistance Center, as well as Commercial Service offices overseas by visiting www.buyusa.gov.